Long-Term Pavement Performance

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Quick Start to The Long-Term Pavement Performance Standard Data Release

Standard Data Release (SDR)

The LTPP Standard Data Release (SDR) is a single DVD or a 5-CD set of data extracted from the LTPP Pavement Performance Database (PPDB). Between releases, data is added and updated by the four LTPP regional offices that are responsible for collecting and processing the data. The data is subsequently uploaded to the PPDB and put through additional consistency checks in preparation for the release. The SDR is all LTPP data from the PPDB, divided by data module, in Access 2000 databases. A sheet listing each data module is included in the SDR package. The SDR is available, free of charge, from the LTPP Customer Support Service Center: LTPPInfo@fhwa.dot.gov.

Pavement Performance Database User's Reference Guide (PPDURG)

This document was written to aid in understanding and using the data in the LTPP PPDB. It contains an introduction to the LTPP program and the structure of the database, a description of the location of various data elements, contents of the data tables, and other tips and examples. A review of this document will give the user a good overview of the data in the SDR. The PPDURG can be found in the Reference Library CD. **References to additional information in the PPDURG will be bolded in the remainder of this Quick Start document.**

LTPP Program: GPS and SPS

The LTPP Program collects data for two categories of test sections: General Pavement Studies (GPS) **(section 1.3.1)** and Specific Pavement Studies (SPS) **(section 1.3.2)**. GPS test sections were selected from existing in-service pavement. SPS projects were constructed for the LTPP Program. Each SPS project site has multiple test sections of differing experimental treatment factors **(section 1.3/1.4)**. Data collected during the construction phase is stored in the SPS#_* tables. For example, SPS-1 construction data is stored in the tables beginning with SPS1 **(section 11.3)**. Descriptions of the GPS and SPS experiments can be found in **Appendix B** of the PPDURG.

Section Identification

Each test section is identified by a 2-digit state code (STATE_CODE, **(section 3.1)**) and a 4-character ID (SHRP_ID, **(section 3.1))**. These two elements are used in most of the data tables to identify data collected for a particular test section **(section 2.1)**. A list of state codes can be found in the CODES table (in each Access database) where CODETYPE = STATE_PROVINCE.

In many tables, the field CONSTRUCTION_NO is used to identify the pavement structure at the time the data was collected. A construction number (CN) of 1 is assigned to each section when it is accepted into the LTPP program. Each time a maintenance or rehabilitation activity occurs on the section, a new CN is assigned (CN +1) **(section 3.1)**. Some applications use this construction number as an additional ID field since test sections are placed in an experiment based on its pavement structure.

Important Tables

EXPERIMENT_SECTION – This table has one record for each test section and construction number. It contains the date that the CN was assigned and the experiment to which the test section was assigned for that CN. It also indicates the status of the test section and whether the section is part of the Seasonal Monitoring Program **(section 3.1)**.

INV_ID/SPS_ID – These two tables contain location information for GPS and SPS test sections, respectively. Some SPS sections were built on existing pavements. Therefore, some SPS sections have information in the Inventory module, including INV_ID **(section 7.1/11.2)**.

TST_L05B – This table contains the *representative layer structure* for each test section for a given CN. Since the pavement structure can vary over the length of the section, the responsible engineer considered (often averaged) available information and generated a particular layer structure as the "best-guess" for the entire section **(section 13.4.3)**.

MNT_IMP/RHB_IMP – These two tables contain information about rehabilitation and maintenance activities that occurred on each test section. They are the "master" tables for the Maintenance and Rehabilitation modules, respectively. Supporting data for the activities recorded in these two tables can be found in the other RHB_* and MNT_* tables **(sections 8.2, 8.3.1)**.

References

Each module in the SDR contains reference tables that can assist the user. The Data Dictionary (LTPPDD) contains the datatype, units, codetype (where applicable), description, and other information about each field in the database **(section 3.2)**. The LTPPTD provides a description of each table **(section 3.3)**. The CODES table is a complete list of all the coded values used in the database and their definitions **(section 3.4)**. In addition, each Access database has field descriptions in the Design view of the table.

Three helpful tools can be found in the Reference Library CD:

Table Navigator (TN) – This tool can be installed by the data user. The TN can be used to browse through a listing of the tables and fields in the database. The TN can also provide a complete list of coded values used in the database and their definitions.

Quality Checks (QC) Manual – The QC Manual documents the checks that the data is subjected to before being released to the public. For more information about the Quality Control, see **section 2.2**.

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Other Tips

Automated Weather Station (AWS) data is collected for most SPS 1, 2 and 8 sites **(chapter 4)**. Climate (CLM) data is provided by the National Climatic Data Center (NCDC) and the Canadian Climatic Center (CCC) (for Canadian test sections) for weather stations near each of the LTPP test sites. Data for a "virtual" weather station (VWS) at each LTPP site is generated using a weighted average of the data from the 5 nearest operating weather stations (OWS) **(chapter 5)**. Seasonal Monitoring Program (SMP) data is collected only for the sites specifically chosen for this program **(chapter 10)**.

If you are interested in traffic data, notice that there is usually a discontinuity in the data estimated before 1990 and the data estimated during and after 1990. This is likely due to the fact that the pre-1990 numbers were historical estimates and were often not based on any actual counts at the LTPP site. The figures estimated during and after 1990 are based on data collected at or near the site **(chapter 12)**.